Using the Medicare Current Beneficiary Survey (MCBS) to identify veterans and analyze the utilization and cost of health care resources

PI: Yvonne Jonk, PhD
Center for Chronic Disease Outcomes Research
Minneapolis VA Medical Center
E-mail: Yvonne.Jonk@va.gov
One Veterans Drive 1110
Minneapolis, MN 55417

I. The Medicare Current Beneficiary Survey (MCBS)

- A nationally representative sample of Medicare beneficiaries
  - Data collected since 1991
  - On average, subjects were followed for four years
- Identifies veteran Medicare beneficiaries: e.g. there are 16,928 veterans in years 1991-2002.
- Provides comprehensive information on self-reported health and socioeconomic status, health insurance, and utilization and cost of health care.
- Includes Medicare Fee for Service (FFS) claims data for the entire sample of Medicare beneficiaries including veterans, during the time that they were enrolled in the study. These data have been validated (contains a "flag variable" indicating whether a self-reported Medicare event was also found in the Medicare claims data, was in Medicare claims data only and was not self-reported, or whether the event was self-reported but not found in Medicare claims data).
- Any other types of self-reported care provided and covered by third parties (Medicare HMOs, Medicaid, VHA, private insurance) have not been validated in this way.

II. Self-reported Utilization Data

- Notorious for underreporting problems
- As long as the underreporting is consistent over the years, self-reported utilization data can be used to estimate utilization trends over time.

III. VHA Cost Estimates Within MCBS

- Because VHA does not bill veterans for services provided, all VHA costs found in the MCBS were imputed by CMS.

IV. VHA Data Validation:

- If researchers are interested in merging the MCBS self-reported data and VHA administrative data pertaining to VHA utilization and cost, the VHA administrative data are only available across *all* types of care (inpatient, outpatient, and pharmacy) for FY1998 onward (Table 1). Thus, researchers can only validate the post FY98 MCBS self-reported VHA utilization data.

Table 1. Sources of VHA Utilization and Cost Data *

Type of Care	Utilization Data	Cost Data
Inpatient	Pre FY98: PTF Post FY98: PTF (NPCD)	Pre 1998: HERC/CDR Post 1998: HERC IP AC/CDR
Outpatient	Pre FY98: OPC Post FY98: OPC (NPCD)	Pre 1998: Not available Post 1998: HERC OP AC
Pharmacy	Pre FY98: Not available Post FY98: PBM	Pre FY98: Not available Post FY98: PBM

* PTF = Patient Treatment File (PTF), OPC = Outpatient Care, NPCD = National Patient Care Database, PBM = Pharmacy Benefits Management, HERC = Health Economics Resource Center, AC = Average Cost, CDR=Cost Distribution Report

- Although the VHA Outpatient Care (OPC) data include lists of VHA stop codes prior to FY98, the stop codes are not classified as primary or secondary, and thus a researcher cannot establish valid utilization counts.
- Although the VHA Patient Treatment Files (PTF) are available prior to FY98, if a researcher is interested in the cost of these services, the VA's Health Economics Resource Center's (HERC) Average Cost (AC) data are not available prior to FY98. However, HERC has corresponding categorical cost estimates obtained from the VA's Cost Distribution Reports (CDR) available that can be used to assign an average (or median) categorical cost to an inpatient event across all years of the MCBS data.

V. What we found:

- Self-reported utilization counts were underreported and difficult to match up for several reasons:
    - For those self-reported events whose dates do not exactly match up, researchers need to establish "rules" regarding the span of time to consider the patient's self-reported date as the event seen in the VA administrative files, e.g. give or take "X" number of days.
    - How does a patient's self-reported outpatient visit compare to a VHA stop code or a day visit to any one VHA facility? Do patients think of each "stop" to a clinic within a VA facility as an outpatient event, or do they think of any given day's visit to a VA facility?
    - Lack of consistency in what a prescription consists of contributes to measurement error:
        - When self-reporting prescriptions, how does a patient perceive a prescription refill? Is a refill reported as another prescription?
        - Do patients and pharmacies differentiate prescription counts by dose and/or time periods, e.g. 2 week, 30d or 90d prescriptions for the same drug? What period of time should we consider a prescription for? If we say that one Rx is a 30d supply, then does a 90d prescription count as three Rx's for example?
    - Do the MCBS prescription prices reflect the generally reduced VA prescription drug prices negotiated by the VA?
- Imputed cost estimates for VHA outpatient services appeared reasonably close (in terms of the overall range, mean, median) to those found in the HERC Outpatient AC datasets.
- Imputed cost estimates for VHA pharmacy were consistently higher than those found in the VA's Pharmacy Benefits Management (PBM) files for FY98-2002.
- We found large discrepancies between CMS's imputed cost estimates for VHA inpatient hospitalizations and HERC Inpatient AC estimates.
    - Since CMS' procedures for imputing VHA costs are not available to the general research community, we could not address the reasons for these discrepancies, and we ended up throwing out the CMS imputed VHA inpatient cost estimates.
    - Using the Medicare HIC to VA scrambled SSN crosswalk file obtained from VIReC, all self-reported hospitalizations along with their CMS imputed cost estimates were replaced by utilization found in the VHA Patient Treatment Files (PTF) along with their corresponding categorical cost estimates obtained from the VA's CDR.
- Given problems associated with measurement error, we recommend limiting analyses of VHA expenditures to the post FY98 period when both VHA utilization and cost data are available.

This work was supported by a VA HSRD grant (IIR 01-164) "VA Eligibility Reform and the Demand for VA Services by Elderly Veterans".

A paper entitled "The Impact of VHA Eligibility Reform on Veteran Medicare Beneficiaries' Health Care Utilization and Cost" is currently under revision. Two papers addressing veterans' demographic and health care trends were presented as posters at Academy Health in 2006 and are currently in draft version. A paper comparing self-reported VHA utilization to VHA administrative data is in draft version.